

# Recovery Plan Action Status

**Plan Name:** Chittenango Ovate Amber Snail  
**Plan Status:** Final Revision 1  
**Plan Date:** 21-Aug-06  
**Lead Agency:** USFWS  
**Lead Office:** New York Ecological Services Field Office  
 (4607)  
 753-9334 )

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Chittenango ovate amber snail (Succinea chittenangoensis)	1	1.1	Re-evaluate the taxonomic relationship between Novisuccinea chittenangoensis and other snails	Ongoing Current	FY 2000 - FY 2004		Academic institutions, U.S. Geological Survey, U.S. Fish and Wildlife Service, Region 5	Research: Taxonomic Studies	Internal Technical Assistance	Cost includes development of genetic markers.  FY08 USGS QR funding
Chittenango ovate amber snail (Succinea chittenangoensis)	1	1.2	Assist with future identification of snails at other sites.	Not Started			Academic institutions, U.S. Geological Survey, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Cost estimates for FY 2 and FY 3 could be as high as \$2,000. Plus \$1-2K for FY4-6. Dependent on number of samples collected under Action 5.1.2.
Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.1.1	Establish a monitoring protocol to determine the baseline population at Chittenango Falls.	Complete	FY 2000 - FY 2004	FY 2006	New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Contract	Action funded FY02, FY03 and underway; due to be completed FY04.
Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.1.2	Establish a long-term monitoring protocol for subsequent surveys at Chittenango Falls.	Ongoing Current	FY 2000 - FY 2004		New York State Department of Environmental Conservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Graduate Student	Information gathered from Action 2.1.1 will assist with this action. SUNY ESF post-doc provided recommendations in 2010.

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Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.1.3	Conduct surveys based on the monitoring protocols in occupied habitats.	Ongoing Current	FY 2000 - FY 2004		New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, U.S. Fish and Wildlife Service, Region 5	Management: Population Monitoring	Contract, Graduate Student, Internal Field Assistance	Plus \$3K/yr for FY4-8  Volunteers and Section 6 funds are used for this action. This may change once the survey protocol is finalized, as monitoring needs may vary among years.  2009- SUNY ESF post doc  2010- NYFO led surveys
Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.1.4	Develop a model to help understand how Novisuccinea chittenangoensis' life history characteristics influence the size and status of the population.	Partially Complete	FY 2008		New York State Department of Environmental Conservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Contract, Graduate Student	2008-2009 SUNY ESF post-doc is developing pop model  2010- SUNY ESF did MRR survival estimates but was unable to develop pop model while addressing all of the other tasks. Plan to work either with academic institutions or Service modellers in FY2011
Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.2.1	Ensure consideration of habitat protection in any activities of Park personnel.	Ongoing Current	FY 2006		New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation	Management	Labor type not yet selected	Standard operating costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	2	2.2.2	Inhibit or prevent, when possible, human-induced alterations that may adversely affect the snail's habitat at Chittenango Falls.	Ongoing Current	FY 2006		New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	OPRHP. Costs contingent on need to offset unpredictable natural hazards, e.g., removing loose boulders above Novisuccinea chittenangoensis habitat.

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Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.2.3	Continue to restrict access to the population and habitat at Chittenango Falls.	Ongoing Current	FY 2006		New York State Office of Parks, Recreation and Historic Preservation	Management	Labor type not yet selected	Standard staff costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.2.4	Develop a Novisuccinea chittenangoensis management/protection agreement for Chittenango Falls.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Standard staff costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	1	2.3.1	Provide information to both permanent and seasonal NYSOPRHP staff, on an annual basis, as to the presence and uniqueness of the species, and to the importance of protection of its habitat.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation	Work type not yet selected	Labor type not yet selected	Standard staff costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	2	2.3.2.1	Improve and maintain the permanent display panel erected near the main parking area, keeping it accessible to all patrons and develop any other necessary signage.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation	Work type not yet selected	Labor type not yet selected	Replacement of the sign, a new smaller sign along the trail. + \$500 every three years for sign maintenance.
Chittenango ovate amber snail (Succinea chittenangoensis)	3	2.3.2.2	Upon request, provide additional information in the form of brochures or reports on the species.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation	Work type not yet selected	Labor type not yet selected	Fact sheets available; costs include park brochure that highlights, among other things, Novisuccinea chittenangoensis protection.
Chittenango ovate amber snail (Succinea chittenangoensis)	2	2.4.1	Monitor public use and enforce rules to keep visitors off the Falls.	Ongoing Current	FY 2006		New York State Office of Parks, Recreation and Historic Preservation	Management	Labor type not yet selected	Enforcement part of standard OPRHP operating costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	2	2.4.2	Enforce water quality regulations along Chittenango Creek upstream of Chittenango Falls.	Not Started			New York State Department of Environmental Conservation, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Enforcement part of state/federal standard costs.

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Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	2	2.4.3	Coordinate collecting or other scientific permits that could result in possible take of the species.	Ongoing Current	FY 2006		New York State Department of Environmental Conservation, U.S. Fish and Wildlife Service, Region 5	Other: Regulations	Labor type not yet selected	No chargeable expenses.
Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	1	3.1	Determine if <i>Succinea</i> sp. B is having a negative impact on <i>Novisuccinea chittenangoensis</i> .	Complete	FY 2005	FY 2010	New York State Department of Environmental Conservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Contract, Graduate Student	Study design in first year +\$20K/yr for two-year study. Research initiated in 2005. Research reinitiated for 2008 field season after flooding in 2006. 2009- SUNY post doc. 2010- received report from SUNY post doc.
Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	1	3.2	Further define vegetative composition and structure of habitat used by <i>Novisuccinea chittenangoensis</i> .	Complete	FY 2005	FY 2010	New York State Department of Environmental Conservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Contract, Graduate Student	2009 SUNY post-doc. 2010 SUNY post-doc report.
Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	2	3.3	Determine effects of changes in hydrology on <i>Novisuccinea chittenangoensis</i> and its habitat.	Not Started			New York State Department of Environmental Conservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Costs associated with joint research project including Actions 3.4, 3.5
Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	2	3.4	Determine effects of changes in temperature, humidity, substrate, light, and other factors on <i>Novisuccinea chittenangoensis</i> .	Not Started			New York State Department of Environmental Conservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Costs associated with joint research project along with Actions 3.3, 3.5

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Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	2	3.5	Investigate the effects of environmental contaminants, water quality, and pH on <i>Novisuccinea chittenangoensis</i> and its habitat.	Not Started			New York State Department of Environmental Conservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Costs associated with joint research project along with Actions 3.3, 3.4
Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	1	4	Research techniques for removal of <i>Succinea</i> sp. B from <i>Novisuccinea chittenangoensis</i> habitat at the Falls.	Complete	FY 2005	FY 2010	New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Contract, Graduate Student	Plus \$5K/yr for FY4, 5, and 6; initial costs high because of intensive monitoring needs; tied closely to Actions 2.1.1 and 3.1. 2009 SUNY post doc. 2010- SUNY post-doc report. Does not seem like a feasible management strategy.
Chittenango ovate amber snail ( <i>Succinea chittenangoensis</i> )	3	5.1.1	Check succineid collections at various institutions to determine whether any additional colonies exist.	Not Started			New York State Department of Environmental Conservation, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	

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Chittenango ovate amber snail (Succinea chittenangoensis)	3	5.1.2	Survey similar appropriate habitats within the eastern U.S. and Canada to locate additional colonies of Novisuccinea chittenangoensis, if any, and to identify suitable habitats for establishing new colonies.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5, Natural resource agencies from states or provinces other than New York, The Nature Conservancy and other conservation organizations	Work type not yet selected	Labor type not yet selected	Comprehensive survey. +1K FY 4,5,6.
Chittenango ovate amber snail (Succinea chittenangoensis)	1	5.2.1	Develop an initial captive propagation protocol.	Ongoing Current	FY 2008		New York State Department of Environmental Conservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Internal Technical Assistance	FY08 USGS received QR funding to initiate
Chittenango ovate amber snail (Succinea chittenangoensis)	1	5.2.2	Establish and maintain the captive propagation program.	Not Started			New York State Department of Environmental Conservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Plus \$15K for FY4-20. These are costs per facility and will be refined when the means for establishing a captive population are determined.

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Chittenango ovate amber snail (Succinea chittenangoensis)	1	5.2.3	Conduct research experiments to refine rearing protocols	Not Started			New York State Department of Environmental Conservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Plus \$5K for FY 4-5. Costs in addition to those associated with 5.2.2.
Chittenango ovate amber snail (Succinea chittenangoensis)	1	5.3	Research the potential for augmenting the extant Chittenango Falls population with captive offspring.	Not Started			Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo)	Work type not yet selected	Labor type not yet selected	To begin after Action 2.2 has been initiated. Possible joint research along with Action 5.4.3. (\$15K for 2 years)
Chittenango ovate amber snail (Succinea chittenangoensis)	2	5.4.1	Develop a protocol for evaluating potential release sites.	Not Started			New York State Department of Environmental Conservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Standard staff costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	2	5.4.2	Survey appropriate habitats to identify potentially suitable sites for establishing new populations.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Coordinated with Action 5.4.3; this action will not begin until Action 2.4.1 is completed.

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Chittenango ovate amber snail (Succinea chittenangoensis)	2	5.4.3	Determine methods for establishing additional populations.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	See Action 5.3
Chittenango ovate amber snail (Succinea chittenangoensis)	2	5.4.4	Establish additional Novissuccinea chittenangoensis populations if determined feasible and appropriate.	Not Started			New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Standard staff costs. Monitoring costs are included under Action 2.1.3.
Chittenango ovate amber snail (Succinea chittenangoensis)	3	6.1	Create a data repository for captive population reports, wild population survey reports, scientific research, etc.	Ongoing Current			New York State Department of Environmental Conservation, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Standard staff costs. Files maintained at NYFO
Chittenango ovate amber snail (Succinea chittenangoensis)	3	6.2	Conduct recovery team meetings, as needed.	Partially Complete	FY 2005		Chittenango Ovate Amber Snail Recovery Team	Management: Planning	Labor type not yet selected	Standard staff costs.  03/23/05 and 03/06/2008 COAS meetings
Chittenango ovate amber snail (Succinea chittenangoensis)	3	6.3	Revise plan as appropriate.	Not Started			U.S. Fish and Wildlife Service, Region 5, Chittenango Ovate Amber Snail Recovery Team	Work type not yet selected	Labor type not yet selected	Standard staff costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	3	6.4.1	Monitor implementation/completion of actions.	Ongoing Current	FY 2006		U.S. Fish and Wildlife Service, Region 5, Chittenango Ovate Amber Snail Recovery Team	Work type not yet selected	Labor type not yet selected	Standard staff costs.



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Chittenango ovate amber snail (Succinea chittenangoensis)	3	6.4.2	Monitor the effects of any management actions conducted for Novisuccinea chittenangoensis.	Ongoing Current	FY 2006		New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Standard staff costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	3	6.4.3	Monitor current or potential threats to the species.	Ongoing Current	FY 2006		New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo), Academic institutions, U.S. Fish and Wildlife Service, Region 5	Work type not yet selected	Labor type not yet selected	Standard staff costs.
Chittenango ovate amber snail (Succinea chittenangoensis)	3	6.4.4	Monitor the biological status of Novisuccinea chittenangoensis.	Ongoing Current	FY 2006		New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, Zoological institutions such as the Wildlife Conservation Park/Bronx Zoo and Burnet Park Zoo (Rosamond Gifford Zoo)	Work type not yet selected	Labor type not yet selected	Standard staff costs.